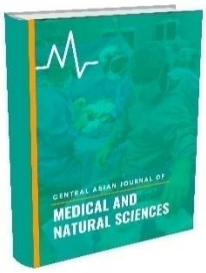
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Method of Prevention of Early Dislocations of the Endoprosthesis in Patients with II-III Degree Dysplastic Coxarthrosis

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Abstract: Despite the significant progress that has been made in recent years, in the development of hip replacement, endoprosthetics for dysplastic coxarthrosis, in which the number of revisions, according to various authors, ranges from 32 to 58%, remains a serious problem. Complex deformation and defects of bone tissue in the area of the acetabular component of the endoprosthesis are accompanied by a high risk of early instability and dislocations of the endoprosthesis, the frequency of which after endoprosthesis in dysplastic coxarthrosis II-III degree ranges from 5 to 11%. The problem of dislocations after hip replacement exists exactly as much as the endoprosthetics itself.

Key words: Dysplastic coxarthrosis, dislocation of the endoprosthesis, posterior capsulotomy.

Relevance: Despite the significant progress made in recent years, in the development of hip replacement, endoprosthetics in dysplastic coxarthrosis of II-III degree, in which the number of revisions, according to various authors, ranges from 32 to 58%, remains a serious problem [1.3.5.7.9.11.13.15]. Complex deformation and defects of bone tissue in the area of the acetabular component of the endoprosthesis are accompanied by a high risk of early instability and dislocations of the endoprosthesis, the frequency of which after hip replacement in dysplastic coxarthrosis ranges from 5 to 11% [2.4.6.8.10.12.14.16]. The problem of dislocations after hip replacement exists exactly as much as the endoprosthetics itself. If we assume that the era of modern endoprosthetics began in 1950-1960 with the works of G.K. McKee and J. Charnley, then dislocations, their causes and tactics of actions were discussed in the very first reports on the experience of endoprosthetics [17.19.21.23]. Many authors note that dislocations of the eedoprosthesis head in dysplastic coxarthrosis occur 3 times more often than in aseptic necrosis of the femoral head and in 22.5–32% of cases are the cause of revision surgery [18.20.22]. Along with this, it should be noted that previously performed reconstructive operations for dysplasia are the cause of both instability of the endoprosthesis cup and an increase in the frequency of dislocations. Thus, the search for techniques for performing endoprosthesis surgery in dysplastic coxarthrosis, which reduce the risk of dislocation of the endoprosthesis in patients, remains an urgent problem today.

Objective: to analyze the use of the technique of posterior capsulotomy for the prevention of dislocations of the endoprosthesis in patients with dysplastic coxarthrosis of II-III degree.

Materials and methods: 66 patients with dysplastic coxarthrosis of II-III degree — 41 (52%) women and 25 (38%) men who underwent total hip replacement were under our supervision in the Department of Orthopedics and trauma consequences of the Bukhara Regional Multidisciplinary Medical Center from 2017 to 2020. Dysplastic coxarthrosis of the II degree was noted in 21 (32%) patients, of the III degree — in 45 (68%). In 42 (54%) cases, the technique of posterior capsulotomy was used during surgery, mainly with a cementless type of fixation of the endoprosthesis components. Depending on the anatomical shape of the bone marrow canal of the femur, femoral components with metaphysical, metaphysical-diaphyseal or diaphyseal fixation type were used, in 24 cases, a cement method of endoprosthetics was performed, mainly in patients with osteoporosis. A serious risk factor for postoperative early dislocation of the endoprosthesis was the tension of the joint capsule when the acetabular component was lowered, in order to achieve an optimal center of rotation.

Evaluation of the results: We evaluated the results of hip replacement in dysplastic coxarthrosis of II-III degree, taking into account the risk factors of dislocation of the endoprosthesis in this pathology, studied the features of intraoperative tactics of posterior capsulotomy aimed at preventing dislocation of the endoprosthesis. In the study group of patients with dysplastic coxarthrosis, female patients prevailed, while over the age of 50 years, pathology was noted in 32 (78%) patients, which was considered by us as an additional risk factor for dislocation of the endoprosthesis. Special attention in these cases was paid to a thorough assessment of anatomical, local data, neurological status, psychological readiness for surgery and individual preparation for postoperative behavior of patients. When assessing the nature of previously performed hip joint operations, the anatomical condition of the hip joint, the presence of a defect of the acetabulum, the volume of the defect of the anterior, upper and posterior walls were evaluated as predictors of the risk of dislocation of the endoprosthesis. The shape of the femoral head and the loss of its sphericity, as well as the cervical-diaphyseal relationship (valgus or varus position, degree of antetorsion or retrotorsion) were evaluated. These factors must be taken into account at the stage of preoperative planning, as they affect the methods of endoprosthetics [24.26.27].

Surgery technique: After spinal anesthesia. We lay the patient on his side. The limb is treated 3 times with a solution of iodine + alcohol. After that, we make a skin incision along the Harding 8-10 cm above the large trochanter, dissect the wide fascia of the thigh throughout the wound, then subperiostally separate the middle gluteus muscle from the large trochanter. Then we dislocate the femoral head. The femoral head is removed with a saw. The acetabulum is processed with cutters, after which we excise the posterior capsule. Next, we process the femoral canal. After that, we install the components of the endoprosthesis. Intraoperatively we check the presence of the volume of movement. Next, we perform hemostasis and suturing of the wound. According to our data, posterior capsulotomy is a serious factor in preventing early dislocation of the endoprosthesis. Because in patients with dysplastic coxarthrosis, the posterior capsule thickens over the years, losing its elasticity [29.30.31.33.35.37.39.41.42].

In the system of preventive measures to reduce the risk and prevent dislocations in endoprosthetics of patients with dysplastic coxarthrosis of II-III degree, attention was paid to preoperative preparation of patients, during which the nature of contracture in bilateral joint damage, the relationship with concomitant pathology of the spine and knee joints and their impact on the possible risks of dislocation of the endoprosthesis in the postoperative period was assessed. In some cases, with pronounced soft tissue atrophy at the preoperative stage, patients underwent rehabilitation treatment aimed at restoring muscle tone and increasing muscle mass in the hip joint by prescribing massage, electrical muscle stimulation. In case of bilateral hip joint lesion with dysplastic coxarthrosis, the joint

with more pronounced functional disorders and a pain component was operated on first, which were determined by an assessment of the pain threshold and a visual analog scale. Compensation for the shortening of the second, non-operated limb was carried out by selecting orthopedic shoes or pads on standard shoes. The average interval between joint operations ranged from 1 to 3 months. In the early postoperative period, for the prevention of dislocation of the endoprosthesis, all patients were put on a plaster derator for the first 10 days on the operated limb, and differentiated tactics for restoring joint function and mobility of patients were used, taking into account the postoperative risk assessment of dislocation [28.32.34.36.38.40.42].

All patients who underwent posterior capsulotomy were recommended bed rest from 1 to 2 weeks, while prescribed electrical stimulation of the thigh and lower leg muscles, isometric gymnastics, exercise therapy on an arthroban 3 times a day, lymphatic drainage massage. In the interval between passive gymnastics on the arthroban, patients were trained in the skills of active exercise therapy for the hip joint. In the late postoperative period, the stability of the endoprosthesis components, the functional state of the joint and aseptic instability were monitored. Such tactics of management of patients after endoprosthetics with dysplastic coxarthrosis allowed us to minimize the risks of dislocation of the endoprosthesis in the early stages after surgery. An analysis of the immediate and long-term results showed that dislocations of the endoprosthesis after performing 66 hip replacements in patients with dysplastic coxarthrosis occurred in 1 (1%) cases due to non-compliance with the regime.

Conclusions:

1. At the stage of preoperative planning of endoprosthetics in patients with dysplastic coxarthrosis of II-III degree, it is necessary to conduct a thorough analysis of all risk factors for dislocation of the endoprosthesis and take them into account when performing surgery.

2. Excision of the posterior capsule of the joint in patients with dysplastic coxarthrosis of II-III degree during endoprosthesis and compliance with the postoperative rehabilitation regime reduces the risk of postoperative dislocations of the endoprosthesis.

LITERATURE:

1. В.Р. Акрамов, Ш.Ш. Ахмедов, Б.У. Хамраев, А.А. Тешаев Э.М. Хаятов, У.У. Раджабов., Эндопротезирование тазобедренного сустава при переломах шейки бедренной кости //. Проблемы биологии и медицины.- Самарканд №3 (96) 2017. стр- 23-26.
2. Акрамов В.Р. Особенности эндопротезирования тазобедренного сустава при анатомических нарушениях вертлужной впадины. "БЮЛЛЕТЕНЬ АССОЦИАЦИИ ВРАЧЕЙ УЗБЕКИСТАНА" Узбекистан г.Ташкент № 3 – 2011 , Стр.94-97
3. Акрамов В.Р. Некоторые проблемы эндопротезирования ранее оперированного тазобедренного сустава. "БЮЛЛЕТЕНЬ АССОЦИАЦИИ ВРАЧЕЙ УЗБЕКИСТАНА" Узбекистан Ташкент № 2 – 2011 , Стр.110-113.
4. Акрамов В.Р.,Ахмедов Ш.Ш., Хамраев Б.У- (Эндопротезирование тазобедренного сустава при переломах шейки бедренной кости) "ПРОБЛЕМЫ БИОЛОГИИ И МЕДИЦИНЫ " Узбекистан г. Самарканд № 3 – 2017 (96), Стр.23-26
5. Акрамов В.Р.,Ш.Ш.,Хамраев А.Ш,Хамраев Б.У – (Тотальное эндопротезирование тазобедренного сустава и профилактика возможных осложнений) "НОВЫЙ ДЕНЬ В МЕДИЦИНЕ" Узбекистан. г. Ташкент, №4 (20) 2017, Стр.56-58
6. Акрамов В.Р., Ахмедов Ш.Ш., Хамраев А.Ш., Хамраев Б.У- (Эндопротезирование тазобедренного сустава при дегенеративно-дистрофических заболеваниях у взрослых)

“БЮЛЛЕТЕНЬ АССОЦИАЦИИ ВРАЧЕЙ УЗБЕКИСТАНА” Узбекистан г.Ташкент № 2 – 2018, Стр.42-44.

7. V.R.Akramov,B. A.SH.Khamraev, SH.SH.Akhmedov, B.U.Khamraev,(The Arthroplasty Of The Hip At Fracture Of A Neck Of A Femur) European Journal of Business & Social Sciences., ISSN: 2235-767X.,Volume 07 Issue 05.,May 2019.
8. V.R.Akramov,B. A.SH.Khamraev, SH.SH.Akhmedov, B.U.Khamraev,(Prevention Of Possible Complications Before And After Total Endoprotesization Of The Combin) European Journal of Business & Social Sciences., ISSN: 2235-767X.,Volume 07 Issue 05.,May 2019.
9. Асилова Саодат Убайевна., Акрамов Вохид Рустамович., Ахмедов Шамшод Шавкатович., Мирзамуродов Хабибжон Халимович (Ташкент, Узбекистан).//ОЦЕНКА РЕЗУЛЬТАТОВ ЛЕЧЕНИЯ ПРИМЕНЕНИЯ ОБОГАЩЕННОЙ ТРОМБОЦИТАМИ ПЛАЗМЫ ПРИ АСЕПТИЧЕСКОМ НЕКРОЗЕ ГОЛОВКИ БЕДРЕННОЙ КОСТИ. POLISH SCIENCE JOURNALЮ., ISSUE 12(33) Part 2. WARSAW, POLAND Wydawnictwo Naukowe "iScience" 2020.
10. НА Корж, ВА Филиппенко, ВА Танькут, ВР Акрамов, АВ Танькут. ПЕРВИЧНОЕ ЭНДОПРОТЕЗИРОВАНИЕ НА РАНЕЕ ОПЕРИРОВАННОМ ТАЗОБЕДРЕННОМ СУСТАВЕ.// Вісник морської медицини. Украина. № 2 2011,Стр.196-197.
11. Асилова Саодат, Акрамов Вохид, Назаров Равшан, Ахмедов Шамшод. МРТ-исследование у пациентов с идиопатическим кокаартрозом тазобедренного сустава.// Международный журнал психосоциальной реабилитации. № 2 Том 24 2020, Стр.410-415.
12. Ахмедов Ш. Ш. и др. ЭНДОПРОТЕЗИРОВАНИЕ ТАЗОБЕДРЕННОГО СУСТАВА ПРИ ДЕГЕНЕРАТИВНО-ДИСТРОФИЧЕСКИХ ЗАБОЛЕВАНИЯХ У ВЗРОСЛЫХ //КОЛОНКА РЕДАКТОРА. – 2008.
13. Ахмедов Ш. Ш. и др. The peculiarities of prophylaxis of pulmonary thromboembolism after total hip endoprosthesis in dysplastic coxarthrosis //Новый день в медицине. – 2020. – №. 2. – С. 53-55.
14. Akhmedov S. The arthroplasty of the hip at fracture of a neck of a femur //European Journal of Business and Social Sciences. – 2019. – Т. 7. – №. 5. – С. 1423-1428.
15. Тешаев А., Асилова С., Ахмед С. Аппаратно-хирургическое лечение переломов дистального конца костей предплечья // Европейский журнал молекулярной и клинической медицины. - 2020. - Т. 7. - №. 3. - С. 3906-3919.
16. Ахмедов Ш. Ш. и др. Особенности профилактики ТЭЛА после тотального эндопротезирования при диспластических коксартрозах. – 2020.
17. Shavkatovich A. S., Shahobovich K. A., Esonboevich T. B. METOD FOR OPTIMIZATION OF PIPE JOINT ENDOPROSHETICS IN DYSPLASTIC COXAARTHROSIS //Euro-Asia Conferences. – 2021. – Т. 3. – №. 1. – С. 204-205.
18. Shavkatovich A. S., Shahobovich K. A., Esonboevich T. B. METHOD OF EARLY REHABILITATION AFTER TOTAL HIP ENDOPROSHETICS IN DYSPLASTIC COXARTHROSIS //E-Conference Globe. – 2021. – С. 184-185.
19. Хамраев А. Ш., Тугузов Б. Э., Ахмедов Ш. Ш. Оптимизация тотального эндопротезирования тазобедренного сустава при диспластическом коксартрозе //Врач скорой помощи. – 2020. – №. 8. – С. 60-71.

20. Shavkatovich A. S. Prevention of possible complications before and after total end protestation of the combine //European Journal of Business and Social Sciences. – 2019. – T. 7. – №. 5. – C. 1413-1422.
21. Mirzamurodov Habibjon Halimovich, Nurulloev Sukhrob Ozodovich. IMPROVEMENT OF SURGICAL TREATMENT OF PATIENTS WITH COMBINED DEGENERATIVE-DYSTROPHIC PATHOLOGY OF THE HIP JOINT AND SPINE WITH PREVALENCE OF MANIFESTATIONS OF COXARTHROSIS// British Medical JournalVolume-1, No 2., 2021. P.180-187.
22. Mirzamurodov, Habibjon H. (2021) "FEATURES OF SURGICAL TACTICS OF TREATMENT OF PATIENTS WITH COXOVERTEBRAL SYNDROME," Central Asian Journal of Medicine: Vol. 2021 : Iss. 2 , Article 7.
23. Mirzamurodov H. H. New approaches to treatment of patients with coxovertebral syndrome //Asian journal of Pharmaceutical and biological research. – 2021. – T. 10. – №. 2. – C. 9-19.
24. Ходжанов И.Ю., Мирзамуродов Х.Х. «Тазово-вертебральный синдром, диагностика и лечение». *научно-практический журнал «Травматология, ортопедия и реабилитация»* 1 (2021): 70-76.
25. Kh, Mirzamurodov H., I. Yu Khodzhanov, and S. O. Nurulloev. "Complex conservative therapy for hip-spine syndrome." *International Scientific and Educational electronic journal" Education and science in the xxi century* (2021): 1438-1439.
26. Kh, Mirzamurodov Kh, et al. "Optimization of total hip arthroplasty in dysplastic coxarthrosis." *New day in medicine* 4 (2020): 32.
27. Nurulloyev S. O., Mirzamuradov H. H. Morphological Changes In Bone Tissue In Chronic Osteomyelitis On The Background Of Application Of Plate Concentrate //The American Journal of Medical Sciences and Pharmaceutical Research. – 2021. – T. 3. – №. 04. – C. 160-164.
28. Nurullaev S. O. et al. Our experience in the treatment of grade I-II gonarthroa with hyaluronic acid preparations //ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL. – 2020. – T. 10. – №. 12. – C. 1767-1771.
29. Nurulloev S. O., Kh M. K. Our experience in the treatment of degree i-ii gonarthrosis with drugs hyalouranic acid //Innovation in the modern education system. – 2021. – №. 1 Part 5. – C. 546-548.
30. НуруллоевС., & Бахранов, Б. (2021). Анализ Частоты Встречаемости Ацептического Некроза Головки Бедренной Кости После Covid-19. *CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES*, 284-287.
31. Nurulloev, Sukhrob O. (2021) "FEATURES OF MORPHOLOGICAL CHANGES IN THE BONES AND SURROUNDING TISSUES IN CHRONIC OSTEOMYELITIS AND TREATMENT WITH LASER OSTEOPERFORATION," *Central Asian Journal of Medicine*: Vol. 2021 : Iss. 2 , Article 8.
32. Nurulloyev Sukhrob Ozodovich. Analysis of morphological changes in the bones after osteomyelitis and features of treatment methods // Asian journal of Pharmaceutical and biological research. Volume 10 Issue 2 MAY-AUG 2021
33. Хамраев Б. У., Акрамов В. Р. Программа для выражения способа лечения методом блокирующего интрамедуллярного остеосинтеза при переломе бедренной кости

//Свидетельство об официальной регистрации программы для ЭВМ. Агентство по интеллектуальной собственности Республики Узбекистан. – 2019.

34. Khamraev B.U., Akhmedov Sh.Sh. TWO-STAGE REVISION HIP REPLACEMENT PATIENS WITH SEVERE ACETABULUM DEFECT (CASE REPORT) // Asian journal of Pharmaceutical and biological research. Volume 10 Issue 2 MAY-AUG 2021.
35. Khamraev B.U., Akhmedov Sh.Sh. OUR EXPERIENCE OF TREATMENT OF FEMOR FRACTURES BY THE METHOD OF INTRAMEDULAR LOCKING OSTEOSYNTHESIS. // Asian journal of Pharmaceutical and biological research. Volume 10 Issue 2 MAY-AUG 2021.
36. Uktamovich H. B., Shavkatovich A. S. OPTIMIZATION OF BLOCKING INTRAMEDULLARY OSTEOSYNTHESIS METHODS FOR FEMORAL FRACTURES //Asian journal of pharmaceutical and biological research. – 2021. – Т. 10. – №. 3.
37. Uktamovich H. B., Shavkatovich A. S. BLOCKING INTRAMEDULLARY OSTEOSYNTHESIS-AS EFFECTIVE METHOD FOR FEMORAL FRACTURES //Asian journal of pharmaceutical and biological research. – 2021. – Т. 10. – №. 3.
38. Khamraev B. U., Akramov B. P. Program for expressing the method of treatment by the method of blocking intramedullary osteosynthesis for a fracture of the femur //Certificate of official registration of a computer program. Agency for Intellectual Property of the Republic of Uzbekistan. – 2019.
39. Amrilloevich N. D. Features of the application of external osteosynthesis in gonarthrosis //Asian journal of Pharmaceutical and biological research. – 2021. – Т. 10. – №. 2.
40. Uli Z. A. K., Amrilloevich N. D. MORPHOLOGICAL CHANGES IN THE HYALINE CARTILAGE OF THE KNEE JOINT AGAINST THE BACKGROUND OF INTRA-ARTICULAR ADMINISTRATION OF THE PREPARATION OF HYALURONIC ACID IN RATS WITH EXPERIMENTAL OSTEOARTHRITIS //Asian journal of pharmaceutical and biological research. – 2021. – Т. 10. – №. 3.
41. Uli Z. A. K., Amrilloevich N. D. MORPHOGENESIS OF HYALINE CARTILAGE OF THE KNEE JOINT AGAINST THE BACKGROUND OF INTRA-ARTICULAR INJECTION OF PLATELET-RICH AUTOLOGOUS PLASMA //Asian journal of pharmaceutical and biological research. – 2021. – Т. 10. – №. 3.
42. Ziyadullaev Abdusalom Khabibulla oglu. EVALUATION OF THE FUTURE RESULTS OF APPLICATION OF ARTHRO-MEDULLARY BYPASSING IN GONARTHROSIS. // Asian journal of Pharmaceutical and biological research. Volume 10 Issue 2 MAY-AUG 2021